

Yu-Fai Leung

Associate Professor

Department of Parks, Recreation and Tourism Management
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EDUCATION

- **Ph.D. Forestry, Virginia Polytechnic Institute and State University (Virginia Tech), 1998**
Advisor: Dr. Jeffrey L. Marion
Dissertation: Assessing and Evaluating Recreation Resource Impacts: Spatial Analytical Approaches
- **M.Phil. Geography, The Chinese University of Hong Kong (CUHK), 1992**
Advisor: Dr. Ronald J. Neller
Thesis: A Study of Trail Degradation along the Pat Sin Range, North New Territories, Hong Kong
- **B.S.Sc. (2nd Hons.) Geography (Biology Minor), The Chinese University of Hong Kong, 1989**

ACADEMIC INTERESTS

- Sustainable visitor use (recreation, tourism, ecotourism) planning and management in protected areas
- Recreation ecology and visitor impact monitoring
- Effectiveness evaluation of visitor education and management techniques
- International comparisons of protected area management
- Applications of geospatial technologies

APPOINTMENTS HELD

- **2005 - Present, Associate Professor, *Department of Parks, Recreation & Tourism Management* (PRTM), College of Natural Resources, North Carolina State University (NCSU)**
[Associate Faculty Member, *Department of Forestry and Environmental Resources*, NCSU]
- 1999 – 2005, Assistant Professor, PRTM, NCSU
- 2002, International Consultant on Forest Ecotourism, Chinese Academy of Forestry Sciences, China
- 1998 - 1999, Postdoctoral Research Associate, Department of Forestry, Virginia Tech
- 1998, Recreational Use Consultant, New York City Department of Environmental Protection

TEACHING EXPERIENCE

Courses Taught:

- 2000 – Present, Principles of Geographic Information Science (Graduate)
- 2000 – Present, Environmental Impacts of Recreation and Tourism (Graduate)
- 1999 – Present, Principles of Recreation Planning and Facility Development (Undergraduate)

Guest Lectures:

- Introduction to Geographic Information Science (Graduate)
- Landscape Design Methods (Graduate)
- World Forestry (Undergraduate)
- Various PRTM classes

RESEARCH EXPERIENCE

Research Grants:

- 2006 – 2009, U.S. National Park Service (**Co-P.I.**)
Marion, J. and Y.-F. Leung, Investigating resource impacts associated with on- and off-trail hiking within the Potomac Gorge
- 2006 – 2008, National Association of State Park Directors (**P.I.**),
Leung, Y.-F. and C. Siderelis, Annual information exchange for U.S. state park systems
- 2005 – 2007, National Science Foundation (student scholarship) and NCSU Int'l Programs (**P.I.**)
Leung, Y.-F. and J. Robinson, International comparison of visitor impact monitoring and management in Australian and U.S. protected areas
- 2004 – 2007, U.S. National Park Service (**P.I.**)
Leung, Y.-F. and P. Newman, Developing a Visitor Experience and Resource Protection (VERP) monitoring program for Yosemite National Park
- 2002 – 2005, U.S. National Park Service (**Co-P.I.**)
Monz, C. and Y.-F. Leung, Developing visitor impact monitoring programs for seven coastal national parks in the eastern United States
- 2002, UNEP and the Chinese Academy of Forestry Sciences (**International Consultant**)
Leung, Y.-F., Developing sustainable tourism plans for two Natural Forest Protection Program (NFPP) sites in China
- 2001 – 2002, Earthwatch Institute (**Co-P.I.**),
Manning, R. and Y.-F. Leung, Carrying Capacity in National Parks
- 2000 – 2003, U.S. National Park Service (**P.I.**)
Leung, Y.-F. Research to support implementation of the Visitor Experience and Resource Protection (VERP) framework in the Boston Harbor Islands National Recreation Area – Resource Component
- 2000 – 2004, U.S. Department of Agriculture, Forest Service (**P.I.**)
Leung, Y.-F., Annotated Bibliography of Recreation Ecology and Visitor Impact Management
- 2000 – 2002, The Leave No Trace, Inc. (**P.I.**)
Leung, Y.-F. and A. Attarian, Effectiveness evaluation of the national Leave No Trace (LNT) outdoor skills and ethics program

PEER-REVIEWED JOURNAL ARTICLES

- Kline, C., D. Cardenas, Y.-F. Leung and S. Sanders. In Press. Sustainable farm tourism: Understanding and managing environmental impacts of visitor activities. *Journal of Extension*.
- Marion, J., Y.-F. Leung, and S. Nepal. 2006. Monitoring trail conditions: new methodological considerations. *George Wright Forum* 23(2): 36-49.
- Monz, C. and Y.-F. Leung. 2006. Meaningful measures: developing indicators of visitor impact in the National Park Service Inventory and Monitoring program. *George Wright Forum* 23(2): 17-27.
- Newman, P., C. Monz, Y.-F. Leung, and D. Theobald. 2006. Monitoring campsite proliferation and conditions: recent methodological considerations. *George Wright Forum* 23(2): 28-35.
- Manning, R. E., Y.-F. Leung, and M. Budruk. 2005. Research to support management of visitor carrying capacity of Boston Harbor Islands. *Northeastern Naturalist* 12(SI-3): 201-220.
- Leung, Y.-F. and M. I. Ivy. 2003. How useful are course websites? A study of students' perceptions. *Journal of Hospitality, Leisure, Sport & Tourism Education* 2(2): 15-24.
- Leung, Y.-F. and J.-H. Lee. 2003. Recreation ecology and visitor carrying capacity management: Implications for protected areas in East Asia. *Korean Journal of Ecology* 26(2): 53-58.
- Leung, Y.-F. 2001. Environmental impacts of tourism at China's World Heritage sites. *Tourism Recreation Research* 26(1): 117-122.
- Marion, J. L. and Y.-F. Leung. 2001. Trail resource impacts and an examination of alternative assessment techniques. *Journal of Park and Recreation Administration* 19(3): 17-37.
- Leung, Y.-F. and J. L. Marion. 1999. Assessing trail conditions in protected areas: an application of a problem-assessment method in Great Smoky Mountains National Park. *Environmental Conservation* 26: 270-279.
- Leung, Y.-F. and J. L. Marion. 1999. Spatial strategies for managing visitor impacts in national parks. *Journal of Park and Recreation Administration* 17(4): 20-38.
- Leung, Y.-F. and J. L. Marion. 1999. Characterizing backcountry camping impacts in Great Smoky Mountains National Park, USA. *Journal of Environmental Management* 57(3): 193-203.
- Leung, Y.-F. and J. L. Marion. 1999. The influence of sampling interval on the accuracy of trail impact assessment. *Landscape and Urban Planning* 43(4): 167-179.
- Leung, Y.-F. 1998. Using the Internet for natural resources research: results from an online user survey. *Journal of Natural Resources and Life Sciences Education* 27: 8-12.
- Leung, Y.-F. and J. L. Marion. 1998. Evaluating spatial qualities of visitor impacts on recreation resources: an index approach. *Journal of Applied Recreation Research* 23(4): 367-389.
- Lam, K.-C., Y.-F. Leung, and Q. Yao. 1997. Nutrient fluxes in the Shenchong Basin, Deqing County, South China. *Catena* 29(2): 191-209.
- Leung, Y.-F. 1997. Natural resources research on the Internet: Possibilities and pitfalls. *Natural Areas*

Journal 17(1): 69-74.

- Leung, Y.-F. and J. L. Marion. 1996. Trail degradation as influenced by environmental factors: A state-of-knowledge review. *Journal of Soil and Water Conservation* 51(2): 130-136.
- Leung, Y.-F. and R. J. Neller. 1995. Trail degradation along the Pat Sin Range: An example of environmental geomorphology. *Hong Kong Geologist* 1: 79-87.

BOOK CHAPTERS

- Leung, Y.-F., L. Marafa and K.-C. Chau. In Press. Urban ecotourism: Embracing or over-stretching the concept: The case of Hong Kong. In: *Sustainable Management of Protected Areas for Future Generations*. (a book based on the 5th IUCN-WCPA Conference on Protected Areas of East Asia)
- Leung, Y.-F. and J. L. Marion. 2004. Management impacts of camping. In: Buckley, R. (ed.), *Environmental Impacts of Ecotourism*. Wallingford, UK: CABI Publishing, pp. 245-258.
- Marion, J. L. and Y.-F. Leung. 2004. Environmentally sustainable trail management. In: Buckley, R. (ed.), *Environmental Impacts of Ecotourism*. Wallingford, UK: CABI Publishing, pp. 229-243.
- Leung, Y.-F. 2003. Resource management. In: Jenkins, J. and Pigram, J. (eds), *Encyclopedia of Leisure and Outdoor Recreation*. London, UK: Routledge, pp. 434-435.
- Leung, Y.-F., J. L. Marion, and T. A. Farrell. 2001. The role of recreation ecology in sustainable tourism and ecotourism. In: McCool, S. F. and N. Moisey (eds), *Tourism, Recreation and Sustainability: Linking Culture and Environment*. Oxon, UK: CABI Publishing, pp. 21-39.
- Marion, J. L. and Y.-F. Leung. 1998. International impact research and management. In: Hammitt, W. E. and D. N. Cole, *Wildland Recreation: Ecology and Management (2nd Edition)*. New York, NY: Wiley, pp. 329-346.
- Marion, J. L. and Y.-F. Leung. 1998. Campsite survey implications for managing designated campsites at Great Smoky Mountains National Park. In: Kulhavy, D. L. and Legg, M. H. (eds.), *Wilderness and Natural Areas in Eastern North America: Research, Management and Planning*. Nacogdoches, TX: Stephen F. Austin State University, Center for Applied Studies in Forestry. pp. 146-155.

OTHER JOURNAL AND MAGAZINE ARTICLES

- Leung, Y.-F. and C. Monz. 2006. Visitor impact monitoring: Old issues, new challenges. *George Wright Forum* 23(2): 7-10.
- Naber, M. D. and Y.-F. Leung. 2006. Technology lends a helping hand: Recreation managers are learning the benefits of using geospatial technologies in resource management. *Parks and Recreation* 41(7): 24-30.
- Dorwart, C., Y.-F. Leung, and R. Moore. 2004. Managing visitors' perceptions. *Parks and Recreation* 39(5): 24-31.
- Leung, Y.-F. 2004. Leisure matters to the environment: The era of ecoleisure. *Australasian Parks and Leisure* 7(2): 20.

- Wirsching, A., Y.-F. Leung, and A. Attarian. 2003. Swatting little bugs: what agencies can do to decrease depreciative visitor behavior. *Parks and Recreation* 38(11): 16-22.
- Leung, Y.-F. and A. Attarian. 2003. Frontcountry visitor information/education programs: are there lessons for wilderness? *International Journal of Wilderness* 9(1): 32-33.
- Leung, Y.-F., N. Shaw, K. Johnson, and R. Duhaime. 2002. More than a database: integrating GIS data with the Boston Harbor Islands visitor carrying capacity study. *George Wright Forum* 19(1): 69-78.

PROCEEDINGS PAPERS

- Dorwart, C., R. L. Moore and Y.-F. Leung. In Press. Visitor employed photography (VEP): Its potential and use in evaluating visitors' perceptions of resource impacts on trail and park settings. *Proceedings of the 2006 Northeastern Recreation Research Conference; April 2006; Lake George, NY*. Newtown Square, PA: USDA Forest Service, Northeastern Experiment Station.
- Leung, Y.-F., J. Robinson and J. Flood. 2006. Book of Abstracts -- The 28th Annual Southeastern Recreation Research (SERR) Conference; Feb. 26-28, 2006; Wilmington, North Carolina. Raleigh, NC: NC State University, Department of Parks, Recreation and Tourism Management.
- Robinson, J., Y.-F. Leung and P. F. J. Eagles. 2006. Making your visitors count: Collecting and archiving visitation data in U.S. protected areas. In: Harmon, D., ed. *People, Places, and Parks: Proceedings of the 2005 George Wright Society Conference on Parks, Protected Areas and Cultural Sites*. Hancock, MI: The George Wright Society, pp. 236-241.
- Monz, C., E. Young, and Y.-F. Leung. 2005. Monitoring the impacts of visitors to shorebird populations in the NPS Coastal and Barrier Islands Network areas. In: Bricker, K. (ed.), *Proceedings of the 2004 Northeastern Recreation Research; March 28-30, 2004; Lake George, NY*. General Technical Report NE-326. Newtown Square, PA: USDA Forest Service, Northeastern Experiment Station, pp. 373-377.
- Bloyer, J., L. Gustke, and Y.-F. Leung. 2004. Indicators for sustainable tourism development: crossing the divide from definitions to actions. In: Pineda, F. D. and C. A. Brebbia (eds.), *Sustainable Tourism*. Southampton, UK: Wessex Institute of Technology Press, pp. 109-115.
- Ingle, C., Y.-F. Leung, C. Monz and H. Bauman. 2004. Monitoring visitor impacts in coastal national parks: A review of techniques. In: Harmon, D., B. M. Kilgore, and G. E. Vietzke (eds.) *Protecting Our Diverse Heritage: The Role of Parks, Protected Areas, and Cultural Sites -- Proceedings of the George Wright Society/National Park Service Joint Conference; April 14-18, 2003; San Diego, CA*. Hancock, MI: The George Wright Society, pp. 228-233.
- Leung, Y.-F. and K. Meyer. 2004. Soil compaction as indicated by penetration resistance: A comparison of two types of penetrometers. In: Harmon, D., B. M. Kilgore, and G. E. Vietzke (eds.) *Protecting Our Diverse Heritage: The Role of Parks, Protected Areas, and Cultural Sites -- Proceedings of the George Wright Society/National Park Service Joint Conference; April 14-18, 2003; San Diego, CA*. Hancock, MI: The George Wright Society, pp. 370-375.
- Leung, Y.-F. and T. A. Farrell. 2002. Visitor impact knowledge is basic. In: *Portfolio of Statements and Presentations - The World Ecotourism Summit; May 19-22, 2002; Quebec City, Canada*.
- Leung, Y.-F., J. L. Marion, and D. N. Cole. 2002. Visitor impact assessment and monitoring systems: evolution and current development. In: Bondrup-Nielsen, S. and N. Munro (ed.), *Managing Protected*

Areas in a Changing World: Proceedings of the 4th International Conference on Science and Management of Protected Areas; May 14-19, 2000; Waterloo, ON, Canada. Wolfville, NS: SAMPAA, pp. 213-220.

- Leung, Y.-F. and J. L. Marion. 2000. Recreation impacts and management in wilderness: a state-of-knowledge review. In: Cole, D. N., S. F. McCool, W. T. Borrie, J. O'Loughlin (comps.), *Wilderness Science in a Time of Change Conference - Volume 5: Wilderness Ecosystems, Threats, and Management; May 23-27, 1999; Missoula, MT.* Proc. RMRS-P-15-VOL-5. Ogden, UT: USDA Forest Service, Rocky Mountain Research Station, pp. 23-48.

INVITED PRESENTATIONS

- Bacon, J., Y.-F. Leung and P. Newman. 2006. Integrated and adaptive management: putting carrying capacity frameworks into practice in Yosemite National Park USA. Paper accepted for presentation the *11th International Symposium on Society and Resource Management; June 3-8, 2006; Vancouver, BC, Canada.*
- Leung, Y.-F. 2006. Recreation ecology: What is it? How can it help recreation resource planners and managers? Paper and field workshop presented at the *26th Annual Conference of National Association of Recreation Resource Planners; May 15-19, 2006; Nashville, Tennessee.*
- Leung, Y.-F. 2004. China's forest tourism development: Global influences and local responses - Perspectives from case studies. Invited paper presented at the *2004 Duke LAS/SIDG Spring Conference; February 28, 2004; Durham, North Carolina.*
- Leung, Y.-F. 2003. Recreation ecology research at the international level: Recent growth and future opportunities. Paper presented at the *12th George Wright Society Conference on Resource Management in Parks and on Public Lands; April 14-18, 2003. San Diego, California.*
- Manning, R. E., Y.-F. Leung, and M. Budruk. 2003. Research to support management of visitor carrying capacity on Boston Harbor Islands. Paper presented at the *Boston Harbor Islands Science Symposium; Oct. 7, 2003; Boston, Massachusetts.*
- Manning, R. E., Y.-F. Leung, P. Newman, and M. Budruk. 2001. Informing carrying capacity decision making in national parks. Poster presented at the *21st Annual Earthwatch Institute Conference. November 17, 2001. Waltham, Massachusetts.*

PROFESSIONAL AFFILIATIONS

- 2005 – Present, Founding Member, *Recreation Ecology Research Network*
- 2003 – Present, Invited Member, *IUCN World Commission on Protected Areas*
- 2002 – Present, Charter Member, *The Leave No Trace Center for Outdoor Ethics*
- 1998 – Present, Member, *George Wright Society for Park and Protected Area Professionals*
- 1994 – Present, Member, *National Recreation and Park Association*

HONORS/AWARDS

- 2006, Outstanding Teacher Award, Department of Parks, Recreation and Tourism Management, NCSU
- 2003, Inducted into Sigma Iota Rho Honor Society for International Studies
- 1997, A. B. Massey Outstanding Graduate Student Award, College of Forestry and Wildlife Resources, Virginia Tech
- 1995, Inducted into Xi Sigma Pi Forestry Honors Society
- 1995, Inducted into Phi Kappa Phi Honors Society

UNIVERSITY SERVICE

- 2004 – Present, PRTM Graduate Admissions Committee (Member)
- 2004 – Present, NCSU College of Natural Resources Research Committee (Member)
- 2002 – Present, NCSU Study Abroad Program, Scholarship Review Committee (Member)
- 2005 – 2006, Task Force on PRTM Departmental Reappointment, Promotion and Tenure Policy
- 2003 – 2005, PRTM PhD Program Review Committee (Member)
- 2001 – 2002, NCSU CNR International Programs Task Force (Member)

PROFESSIONAL SERVICE

- 2006 – Present, Associate Editor, *International Journal of Wilderness*
- 2005 – Present, Associate Editor, *Journal of Park and Recreation Administration*
- 2005 – Present, Coordinator, Integration of visitation data into the World Database of Protected Areas (IUCN and UNEP World Conservation Monitoring Centre)
- 2005 – Present, External IUCN-WCPA reviewer for UNESCO World Heritage site nominations
- 2005 – 2006, Steering Committee of the 2006 Southeastern Recreation Research Conference (Chair)
- 2005, External Ph.D. thesis examiner, Murdoch University, Australia

SELECTED CONFERENCE PRESENTATIONS (Last Five Years Only)

- Dorwart, C., Y.-F. Leung and R. Moore. "Appreciation of the small details": Using visitor employed photography to evaluate visitors' perceptions of trail environment and their effects on experiences. Paper accepted for presentation at the 2006 NRPA Leisure Research Symposium; Oct. 10-14, 2006; Seattle, Washington.
- Leung, Y.-F. 2006. Recreation ecology in East Asia: Redefining impacts? Paper accepted for presentation at the 3rd International Conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas; Sept. 13-17, 2006; Rapperswil, Switzerland.
- Newman, P., Y.-F. Leung, D. Pettebone, and D. Theobald. 2006. Developing spatially-balanced sampling protocols for visitor impact monitoring in protected areas. Paper accepted for presentation at the 3rd International Conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas; Sept. 13-17, 2006; Rapperswil, Switzerland.
- Robinson, J. and Y.-F. Leung. 2006. Visitor use and impact monitoring: An adaptive design model. Poster accepted for presentation at the 3rd International Conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas; Sept. 13-17, 2006; Rapperswil, Switzerland.
- Robinson, J. and Y.-F. Leung. 2006. Adaptive monitoring of visitor use and impacts: Conceptual model and a research agenda. Poster accepted for presentation at 11th International Symposium on Society and Resource Management; June 3-8, 2006; Vancouver, BC, Canada.
- Leung, Y.-F., K. Levin, S. Freeman, T. Thompson, and I. Smith. 2006. Examining the emerging concept of urban ecotourism and its applicability to central North Carolina. Poster presented at the 28th Southeastern Recreation Research Conference; Feb. 26-28, 2006; Wilmington, North Carolina.
- Leung, Y.-F. and J. Robinson. 2005. Environmental effects of high impact and emerging recreational activities: An international comparison of research and a discussion of proactive management approaches. Paper presented at the 14th National Outdoor Conference; July 3-6, 2005; Gold Coast, Queensland, Australia.
- Budruk, M., Leung, Y.-F., and R. E. Manning. 2005. A mutlidisciplinary approach to developing indicators of sustainable visitor use for urban protected areas: U.S. examples And implications to East Asia. Paper presented at the 5th IUCN/WCPA East Asia Conference; June 2005; Hong Kong.
- Leung, Y.-F., M. Naber, L. Steider, and M. Smith. 2005. Applying geospatial technologies to assess and monitor social trails in national parks: Recent examples. Paper presented at the 13th George Wright Society Conference on Resource Management in Parks and on Public Lands; Mar. 14-18, 2005; Philadelphia, Pennsylvania.
- Monz, C. and Y.-F. Leung. 2005. Developing indicators for visitor-wildlife interactions: Value, feasibility and limitations. Paper presented at the 13th George Wright Society Conference on Resource Management in Parks and on Public Lands; Mar. 14-18, 2005; Philadelphia, Pennsylvania.
- Newman, P., D. Theobald, Y.-F. Leung, L. Bloyers and M. Fincher. 2005. Using GIS to develop a spatially balanced monitoring protocol for resource and experiential Indicators in Yosemite National Park. Paper presented at the 13th George Wright Society Conference on Resource Management in Parks and on Public Lands; Mar. 14-18, 2005; Philadelphia, Pennsylvania.
- Dorwart, C., R. Moore and Y.-F. Leung. 2005. Research on visitor perceptions and resource impacts: Benefits, status, challenges, and recommendations. Paper presented at the 13th George Wright Society

Conference on Resource Management in Parks and on Public Lands; Mar. 14-18, 2005; Philadelphia, Pennsylvania.

- Leung, Y.-F., M. Naber, J. Robinson and A. Downs. 2005. Monitoring natural resource conditions of disc golf courses: Preliminary results from central north carolina. Paper presented at the 2005 Southeastern Recreation Research Conference; Feb. 27-Mar. 1, 2005; Savanna, Georgia.
- Schuster, G., M. Trink, A. Head and Y.-F. Leung. 2005. Should safety compromise sustainability: A study of a properly built trail system and the emergency access lines that intersect it. Paper presented at the 2005 Southeastern Recreation Research Conference; Feb. 27-Mar. 1, 2005; Savanna, Georgia.
- Payne, S., Y.-F. Leung and C. Smith. 2004. Geocache: Treasure or trash? Paper presented at the 2004 Annual Meeting of North Carolina Parks and Recreation Society; Nov. 15-17 2004; Hickory, North Carolina.
- Monz, C., Y.-F. Leung, and C. Dorwart. 2004. Integrating social science approaches into long-term monitoring of visitor resource impacts in national parks: A proposal. Paper presented at the 10th International Symposium on Society and Resource Management; June 2-5, 2004; Keystone Resort, Colorado.
- Ingle, C. and Y.-F. Leung. 2004. Visitor-horse interactions at Assateague Island National Seashore: Development and testing of a behavior observation procedure. Paper presented at the 26th Southeastern Recreation Research Conference; February 8-10, 2004; Charleston, South Carolina.
- Jaite, L., C. Snow, M. Tynan, G. Wainwright and Y.-F. Leung. 2004. Towards an understanding of geocaching: An examination of participant characteristics, environmental Impacts and benefits in Wake County, North Carolina. Poster presented at the 26th Southeastern Recreation Research Conference; February 8-10, 2004; Charleston, South Carolina.
- Meyer, K. and Y.-F. Leung. 2004. Estimating vegetative and bare ground cover as visitor impact indicators: A comparison of three methods. Paper presented at the 26th Southeastern Recreation Research Conference; February 8-10, 2004; Charleston, South Carolina.
- Smith, C., M. Smith and Y.-F. Leung. 2003. Recreational GPS for work and play. Workshop presented at the 2003 Annual Meeting of North Carolina Parks and Recreation Society; Nov. 3, 2003; Durham, North Carolina.
- Meyer, K. and Y.-F. Leung. 2003. Evaluating soil compaction and ground cover indicator measures for visitor use planning on Boston Harbor Islands. Poster presented at the Boston Harbor Islands Science Symposium; Oct. 7, 2003; Boston, Massachusetts.
- Leung, Y.-F., C. Monz, C. Ingle, and H. Bauman. 2003. Establishing visitor impact monitoring programmes for seven coastal protected areas in the eastern United States: First-year experiences. Poster presented at the 5th International Conference on Science and the Management of Protected Areas; May 11-16, 2003; Victoria, British Columbia, Canada.
- Budruk, M., P. Newman, W. Valliere, J. Bacon, D. Laven, R. Manning, and Y.-F. Leung. 2003. Incorporating Earthwatch volunteers into park and protected area research. Poster presented at the 12th George Wright Society Conference on Resource Management in Parks and on Public Lands; April 14-18, 2003. San Diego, California.
- Leung, Y.-F., M. Budruk, and R. Manning. 2003. Assessing and monitoring physical and social impacts of vandalism: Results from the Boston Harbor Islands National Recreation Area. Paper presented at the

12th George Wright Society Conference on Resource Management in Parks and on Public Lands; April 14-18, 2003. San Diego, California.

- Monz, C., Y.-F. Leung, C. Ingle, and H. Bauman. 2003. Visitor impact concerns in the NPS Coastal and Barrier Islands Network areas. Paper presented at the 12th George Wright Society Conference on Resource Management in Parks and on Public Lands; April 14-18, 2003. San Diego, California.
- Ingle, C., Y.-F. Leung, C. Monz, and H. Bauman. 2003. Monitoring visitor impacts in coastal national parks: A review of techniques. Poster presented at the 12th George Wright Society Conference on Resource Management in Parks and on Public Lands; April 14-18, 2003. San Diego, California.
- Leung, Y.-F., K. Johnson, and K. Meyer. 2003. Developing visitor impact monitoring indicators and procedures for Boston Harbor Islands National Park Area. Paper presented at the 12th George Wright Society Conference on Resource Management in Parks and on Public Lands; April 14-18, 2003. San Diego, California.
- Smith, M. and Y.-F. Leung. 2003. Mapping resource impacts on park trails with GPS: A test of procedures. Poster presented at the 2003 NC GIS Conference; February 20-21, 2003; Winston-Salem, North Carolina.
- Holden, T., C. Ingle, K. Meyer, and Y.-F. Leung. 2003. Poster signs preferred over footprints, but both reduce social trail use. Poster presented at the 25th Southeastern Recreation Research Conference; February 19-21, 2003; Asheville, North Carolina
- Massarelli, E., B. Foltz, T. Woody, and Y.-F. Leung. 2003. Visitors' and Managers' Perceptions of Recreation Impacts at Jordan Lake State Recreation Area, North Carolina. Paper presented at the 25th Southeastern Recreation Research Conference; February 19-21, 2003; Asheville, North Carolina.
- Peterson, S., A. Parker, C. Jacobson, D. Bradsher, E. Hunter, A. Lacombe, M. Smith, Y.-F. Leung, and R. L. Moore. 2003. Visitors' perceptions of trail impacts: How accurate are they and how do they affect experiences? Paper presented at the 25th Southeastern Recreation Research Conference; February 19-21, 2003; Asheville, North Carolina.
- Kline, C.; D. Cardenas, and Y.-F. Leung. 2002. An exploratory study of farm tourism impact zones. Paper presented at the NET 2002-National Extension Tourism Conference; Sep. 16-19, 2002; Traverse City, Michigan.
- Leung, Y.-F., R. E. Manning, M. Budruk, and K. Johnson. 2002. Integrating resource and social analysis in the evaluation of visitor carrying capacity of campsites on Boston Harbor Islands. Paper presented at the 9th International Symposium on Society and Resource Management; June 2-5, 2002; Bloomington, Indiana.
- Newman, P., M. Budruk, R. E. Manning, and Y.-F. Leung. 2002. Volunteerism and research in the national parks: A tale of two studies. Paper presented at the 9th International Symposium on Society and Resource Management; June 2-5, 2002; Bloomington, Indiana.
- Johnson, K. and Y.-F. Leung. 2002. Developing visitor impact indicators and monitoring procedures for recreation sites on Boston Harbor Islands. Poster presented at the Boston Harbor Islands Biodiversity Seminar; May 30, 2002; Cambridge, Massachusetts.
- Leung, Y.-F. 2002. Developing sustainability indicators for visitor use in protected areas: An U.S. example with implications to East Asia. Paper presented at the 4th Conference on Protected Areas of East Asia and The Working Session of the IUCN/WCPA; March 18-23, 2002; Taipei, Taiwan.

- Leung, Y.-F. and M. Ivy. 2002. The influence of student characteristics in their evaluation of a park planning course web site. Poster presented at the 4th Biennial Conference on University Education in Natural Resources; March 14-17, 2002; Raleigh, North Carolina.
- Holden, T., Y.-F. Leung, and A. Attarian. 2002. Knowledge of Leave No Trace practices on the Animas River Trail, Durango, Colorado. Paper presented at the 24th Southeastern Recreation Research Conference. February 20-22, 2002; Athens, Georgia.
- Smith, M., S. Peterson, and Y.-F. Leung. 2002. Relationships between user groups and their perceptions of environmental impacts caused by other user groups in a North Carolina county park. Poster presented at the 24th Southeastern Recreation Research Conference. February 20-22, 2002; Athens, Georgia.
- Shaw, N., K. Johnson, Y.-F. Leung, and R. Duhaime. 2001. More than a database: Boston Harbor Islands resource and visitor analysis. Paper presented at the Spatial Odyssey 2001 - The National Park Service GIS Conference; Dec. 3-7, 2001; Primm Valley Resort, Nevada.
- Leung, Y.-F. 2001. Social trails in national parks and protected areas: Conceptual and assessment issues. Paper presented at the 11th George Wright Society Conference on Resource Management in Parks and on Public Lands; April 16-20, 2001. Denver, Colorado.
- Wirsching, A., Y.-F. Leung, and A. Attarian. 2001. A study of visitor preference of Leave No Trace poster designs. Paper presented at the 23th Southeastern Recreation Research Conference. February 21-23, 2001. Asheville, North Carolina
- Lui, P. L.-T., E. Tse, and Y.-F. Leung. 2001. The construction of an integrated policymaking model for the formulation of a competitive tourism policy. Paper presented at the 1st Joint Conference in Hospitality and Tourism. January 12-14, 2001. Hong Kong, China.